SIGNIFICANCE LEVEL OF $\Sigma x^2/(\Sigma x)^2$ BASED ON STUDENT'S DISTRIBUTION

By J. M. SENGUPTA

Statistical Laboratory, Calcutta

The following table gives the ratios $(t^2+N-1)/Nt^2 = \Sigma x^2/(\Sigma x)^2$ corresponding to the values of 't' significant at 5% and 1% levels, the size of sample (N) ranging from 2 to 60 and x being the deviation from any hypothetical mean against which the sample mean is to be tested. Instead of computing actual t-values, what is necessary is to calculate the ratio of the sample sum of squares and the square of the total of x. Observed ratios less than the limits given in the table are to be treated as significant. The table will be found useful when a large number of t-tests are to be carried out.

Size of sample (N)	Ratio $(t^2+N-1)/Nt^2$		Size of sample (N)	Ratio $(t^2+N-1)/Nt^2$	
	5%	1%		5%	1%
2	0.5031	0.5001	18	0.2477	0.1680
3	0.3693	0.3401	19	0.2672	0.1670
4	0.3241	0.2720	20	0.2669	0.1661
5	0.3038	0.2377	21	0.2665	0.1653
6	0.2927	0.2170	22	0.2661	0.1646
7	0.2860	0.2032	23	0.2658	0.1638
8	0.2814	0.1935	24	0.2655	0.1633
9	0.2783	0.1901	25	0.2653	0.1627
10	0.2759	0.1852	26	0.2650	0.1623
11	0.2740	0.1814	27	0.2648	0.1617
12	0.2726	0.1784	28	0.2647	0.1613
13	0.2713	0.1758	29	0.2647	0.1610
14	0.2705	0.1738	30	0.2645	0.1606
15	0.2695	0.1720	40	0.2635	0.1580
16	0.2689	0.1701	50	0.2628	0.1561
17	0.2682	0.1691	60	0.2623	0.1555
			∞	0.2603	0.1507

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